

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Original) A method for synthesizing carbon nanostructures comprising:

providing a substrate having a deposition mask;

depositing a metalorganic layer on the substrate, wherein at least a portion of the
metalorganic layer is deposited on an unmasked portion of the substrate;

removing the deposition mask from the substrate;

oxidizing said portion of the metalorganic layer deposited on an unmasked
portion of the substrate to form a growth catalyst on the substrate; and

exposing the substrate to a carbon precursor gas at a deposition temperature to form
carbon nanostructures.
2. (Presently amended) The method of claim 1, wherein the ~~metalorganic~~ metalorganic layer
is composed of iron phthalocyanine.
3. (Original) The method of claim 1, wherein the metalorganic layer is deposited by a
physical vapor deposition process.
4. (Original) The method of claim 1, wherein the deposited metalorganic layer has a
thickness of between about 1 micron and about 30 microns.
5. (Original) The method of claim 1, wherein the deposition mask is composed of a metal
oxide.

6. (Original) The method of claim 1, wherein the deposition mask is composed of a substance selected from the group consisting of silicon oxide and aluminum oxide.
7. (Original) The method of claim 1, wherein the unmasked portion of the substrate has a top surface composed of a metal oxide.
8. (Original) The method of claim 7, wherein the metal oxide is selected from the group consisting of silicon oxide, aluminum oxide, and magnesium oxide.
9. (Original) The method of claim 1, wherein oxidizing said portion of the metalorganic layer deposited on an unmasked portion of the substrate comprises exposing said portion of the metalorganic layer to an oxygenated atmosphere at a temperature of between about 450°C and about 500°C.
10. (Presently amended) The method of claim 9 1, wherein said portion of the metalorganic layer is exposed to the oxygenated atmosphere for between about 2 hours to about 4 hours.
11. (Original) The method of claim 1, wherein the growth catalyst comprises metal growth catalyst particles.
12. (Original) The method of claim 1, wherein the carbon precursor gas is methane.
13. (Original) The method of claim 1, wherein exposing the substrate to a carbon precursor gas comprises exposing the substrate to an atmosphere containing methane, argon, and hydrogen.
14. (Original) The method of claim 13, wherein the substrate is exposed to the carbon precursor gas for between about 15 minutes and about 60 minutes.

15. (Original) The method of claim 1, wherein the deposition temperature is about 700°C.
16. (Original) The method of claim 1, wherein the metalorganic substance is purified prior to deposition of the metalorganic layer.
17. (Original) The method of claim 1, wherein the oxidizing said portion of the metalorganic layer is performed prior to removing the deposition mask from the substrate.
18. (Original) The method of claim 1, wherein said carbon nanostructures are single wall carbon nanotubes.
19. (Original) The method of claim 1, wherein said carbon nanostructures are one dimensional carbon nanostructures.
- 20-42 (Cancel).